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THE FARM INDEX

ECONOMIC RESEARCH SERVICE



U. S. DEPARTMENT OF AGRICULTURE



MAY 1964



ASPECTS OF POVERTY



Economic Trends



ITEM	UNIT OR BASE PERIOD	'57 - '59 AVERAGE	1963		1963 - 64		
			YEAR	MARCH	JANUARY	FEBRUARY	MARCH
Prices:							
Prices received by farmers	1910-14=100	242	241	240	243	240	240
Crops	1910-14=100	223	238	238	243	242	243
Livestock and products	1910-14=100	253	244	242	242	238	237
Prices paid, interest, taxes and wage rates	1910-14=100	293	312	311	313	313	311
Family living items	1910-14=100	286	298	297	298	299	299
Production items	1910-14=100	262	273	274	273	271	272
Parity ratio		83	77	77	78	77	77
Wholesale prices, all commodities	1957-59=100	—	100.3	99.9	101.0	100.5	100.4
Commodities other than farm and food	1957-59=100	—	100.7	100.6	101.3	101.2	101.1
Farm products	1957-59=100	—	95.7	95.4	96.3	94.5	95.3
Food, processed	1957-59=100	—	101.1	99.0	102.5	100.9	100.4
Consumer price index, all items	1957-59=100	—	106.7	106.2	107.7	107.6	—
Food	1957-59=100	—	105.1	104.6	105.8	106.0	—
Farm Food Market Basket:¹							
Retail cost	Dollars	1,037	1,078	1,079	1,079	1,079	—
Farm value	Dollars	410	394	392	398	393	—
Farm-retail spread	Dollars	627	684	687	681	686	—
Farmers' share of retail cost	Per cent	40	37	36	37	36	—
Farm Income:							
Volume of farm marketings	1947-49=100	123	136	108	159	115	112
Cash receipts from farm marketings	Million dollars	32,247	36,248	2,333	3,380	2,409	2,400
Crops	Million dollars	13,766	16,706	754	1,681	955	850
Livestock and products	Million dollars	18,481	19,542	1,579	1,699	1,454	1,550
Realized gross income ²	Billion dollars	—	41.1	—	—	—	41.2
Farm production expenses ²	Billion dollars	—	28.8	—	—	—	29.2
Realized net income ²	Billion dollars	—	12.2	—	—	—	12.0
Agricultural Trade:							
Agricultural exports	Million dollars	4,105	5,585	505	542	525	—
Agricultural imports	Million dollars	3,977	4,011	353	332	294	—
Land Values:							
Average value per acre	1957-59=100	—	—	123 ³	127 ⁴	128 ⁵	—
Total value of farm real estate	Billion dollars	—	—	143.6 ³	147.6 ⁴	148.7 ⁵	—
Gross National Product ²							
Consumption ²	Billion dollars	456.7	585.1	571.8	—	—	608.5
Investment ²	Billion dollars	297.3	373.1	367.4	—	—	388.0
Government expenditures ²	Billion dollars	65.1	82.3	77.8	—	—	85.0
Net exports ²	Billion dollars	92.4	125.1	123.0	—	—	129.0
	Billion dollars	1.8	4.5	3.6	—	—	6.5
Income and Spending:							
Personal income, annual rate	Billion dollars	365.2	463.0	454.8	478.1	478.8	480.4
Total retail sales ⁶	Million dollars	17,105	20,534	20,350	21,000	21,440	21,134
Retail sales of food group ⁶	Million dollars	4,159	4,926	4,853	5,031	5,007	—
Employment and Wages ⁶							
Total civilian employment	Millions	64.9	68.8	68.4	69.6	69.8	69.8
Agricultural	Millions	6.0	4.9	4.9	4.9	4.8	4.6
Rate of unemployment	Per cent	5.5	5.7	5.7	5.6	5.4	5.4
Workweek in manufacturing	Hours	39.8	40.4	40.5	40.1	40.6	40.7
Hourly earnings in manufacturing, unadjusted	Dollars	2.12	2.46	2.44	2.51	2.51	2.51
Industrial Production ⁶							
1957-59=100		—	124	121	127	128	128
Manufacturers' Shipments and Inventories ^{6, 7}							
Total shipments, monthly rate	Million dollars	28,736	34,774	34,244	36,677	36,338	—
Total inventories, book value end of month	Million dollars	51,158	58,807	58,126	59,991	60,074	—
Total new orders, monthly rate	Million dollars	28,374	35,036	35,364	37,148	36,835	—

¹ Average annual quantities of farm food products based on purchases per wage-earner or clerical-worker family in 1952—estimated monthly.

² Annual rates seasonally adjusted first quarter. ³ As of March 1. ⁴ As of July 1, 1963. ⁵ As of November 1, 1963. ⁶ Seasonally adjusted.

⁷ Revised series.

Sources: U.S. Department of Agriculture (Farm Income Situation, Marketing and Transportation Situation, Agricultural Prices, Foreign Agricultural Trade and Farm Real Estate Market Developments); U.S. Department of Commerce (Industry Survey, Business News Reports, Advance Retail Sales Report and Survey of Current Business); and U.S. Department of Labor (The Labor Force and Wholesale Price Index).

Every year about now USDA economists get a chance to second-guess themselves. They look back at their farm outlook forecasts of the previous fall. They note what has happened since. And, accordingly, they update their predictions for the current farm year.

Last fall, the economists predicted a drop in 1964 of perhaps 5 per cent or more in realized net farm income; they had no basis for assuming any changes in farm laws then in effect.

Passage of the wheat-cotton bill on April 8 enhanced farm income prospects for 1964 . . . Enactment, in effect, recovered much of the anticipated \$600 million decline from the 1963 crop year in wheat farmers' income.

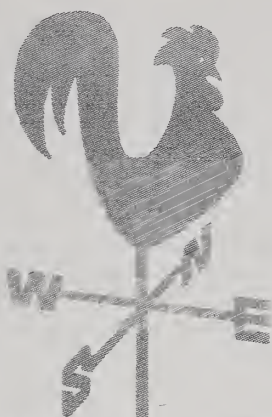
The new law doesn't completely wipe out prospects for a dip in realized net farm income from last year's \$12.3 billion. However, with declining farm numbers, income per farm may stay close to the record \$3,430 in 1963. Earlier, a marked decline from that level had been forecast.

Prices received by farmers for crops are expected to be down a little from last year; even with the new law, wheat and cotton loan rates will be below 1963—although direct payments to farmers will partly offset them.

A rise about like last year is in prospect for farm production expenses—up about 2 per cent from 1963's \$28.8 billion. Domestic markets for farm products look like they will expand about in line with population growth this year. Farm output may also be up a little, both in crops and livestock.

Domestic use of 1963 crops is running above a year earlier and exports are up. Wheat and hay carryovers into the 1964-65 crop year will likely be down significantly and feed grain stocks may be little changed. But, cotton, tobacco and soybeans will likely be up.

Cuts in Plantings: Acreage planted to feed



grains and cotton this spring may turn out below what was indicated in the planting intentions report a couple of months ago.

The report said farmers planned a 3.4 million acre cut in feed grain acreage as of March 1. But growers had until nearly the end of the month to sign up in the program to divert land from feed grains. And sign they did—for 8.6 million acres more than last year.

This means that growers may not fully plant the feed grain acreage intended March 1. But one fact clouds any effort to pinpoint the acreage reduction: At the end of 1963, about 7 million acres came out of conservation reserve contracts. Some of the land may be put into feed grain diversion. And some may go into feed grains and other crops.

Cotton acreage intentions March 1 were about the same as last year—and 4 per cent below average. But actual plantings probably will be down somewhat . . . The new law provides—in addition to a price support loan rate of 30 cents a pound on cotton produced within the 1964 effective allotment—a payment of 3.5 cents a pound to producers planting within their domestic allotment. This allotment equals two-thirds the effective allotment, except on exempted small farms.

If growers reduce their cotton acreage much from 1963, production will likely go below last year's large crop. And the cotton law's provision for payments-in-kind should boost domestic use of the 1964 crop. So, carryover in 1965 might be trimmed from the near-record 12.9 million bales expected at the end of the current marketing year.

General Economy—Bright: The outlook for 1964 continues to be one of general expansion at a rate somewhat above last year. Retail sales, employment, personal income, industrial

the agricultural outlook

production and construction activity all rose to new peaks in the first quarter.

What about the tax cut? Its effects are tough to assess: Some anticipatory spending undoubtedly occurred before the cut and some of the increase in paychecks probably has been pocketed instead of spent. So far, the larger buying power of consumers hasn't been fully reflected in retail sales—March sales, seasonally adjusted, actually slipped a little from the brisk February pace. But, the effect could come on gradually, across the board.

Farm and Feedlot Briefs

Livestock: Cattle slaughter continued at a high level in the first quarter and is expected to stay high in April-June. The recent Cattle and Calves on Feed report showed 1 per cent more animals on feed April 1 than the large inventory a year earlier. Heavyweight cattle numbers on feed—indicative of current slaughter supplies—were up 8 per cent.

Hog slaughter was large earlier this year, but it has since dropped below last year and is expected to remain below for the rest of 1964. Prices were stable in the first quarter—probably will go above the April-June 1963 average of \$15.30 for barrows and gilts at eight markets.

Fats and Oils: Supplies of food fats and oils during the rest of the 1963-64 marketing year will continue at peak levels due to large beginning stocks and a near-record output of vegetable oils. Domestic use and exports also may equal or exceed past records.

But, disappearance won't match supply . . . Carryover next October 1 (including oil equivalent of soybeans) may be up a little from last year's peak—and a record high.

Vegetables: Supplies of most canned and frozen vegetables are ample this spring and prices are about the same as the low levels of a year ago.

Potato prices are higher this spring because of smaller supplies. The remaining storage stocks probably are moderately below a year ago; early spring output is down 15 per cent from last year; and acreage of the important

late spring crop is down 14 per cent.

Early Peaches: Supplies of fresh peaches during early summer are expected to be lighter than last year because of a severe freeze during bloom time in the South, especially in North Carolina, South Carolina, Georgia and Alabama. Last year, these states accounted for over a fifth of the U.S. peach crop. Trees in California, the leading peach state, wintered well. Trees in other states came through the winter in generally good shape.

Broilers: A temporary cutback in broiler production appears to be underway following a nine month period of lower prices to farmers and higher feed costs.

Broiler hatchery activity in 22 states averaged 3 per cent under the same period in 1963 between March 21 and April 11. This means that around mid-year, broiler marketings will probably dip below the 1963 level. First quarter production was up 7 per cent from 1963 and about 3 per cent more chicks have been hatched for second quarter output.

However, the reduction in broiler production may be short-lived. Pullet chicks placed in broiler hatchery supply flocks ran 13 per cent above a year earlier in December-March. If this trend continues over the next three or four months, a large expansion in broiler output is likely in early 1965.

Feed Grains: Prices for each of the four feed grains have been near or a little above the 1963 loan rates since January. Loan rates for corn, sorghums and barley were lower this year because part of the price support is provided by payments to farmers.

In March, farmers received an average of \$1.11 per bushel for corn, 4 cents above loan and 5 cents higher than a year earlier. The larger stocks of "free" corn on hand this spring and the lower loan rate will tend to limit any further rise in prices from now into the summer months.

Farm prices for sorghum grain averaged \$1.75 per cwt. in March, 4 cents above loan. Prices are likely to remain close to current levels during the balance of 1963-64.

LAND USE VARIES WITH SIZE OF FARM IN GEORGIA ANALYSIS

Item	Average acres of open land									
	Crop—livestock farms					General crop farms				
	25	85	200	400	750	25	85	200	400	750
Acres										
Cotton:										
Hand harvested	2.0	7.0	16.4	32.8	0	2.0	7.0	16.4	32.8	0
Machine harvested	0	0	0	0	61.5	0	0	0	0	61.5
Peanuts	4.2	13.9	32.6	65.2	122.2	4.2	13.9	32.6	65.2	122.2
Wheat	0	0	6.7	15.0	15.0	12.6	15.0	15.0	15.0	15.0
Oats	2.0	5.4	11.9	23.0	13.9	0	0	0	0	0
Corn	8.6	32.4	71.3	109.3	62.6	0	0	0	187.0	363.8
Soybeans	0	0	0	0	197.6	0	27.9	86.0	0	0
Pine trees	6.2	0	0	0	0	6.2	21.2	50.0	100.0	187.5
Pasture:										
Temporary	2.0	5.1	11.1	54.7	89.7	0	0	0	0	0
Permanent	0	21.2	50.0	100.0	187.5	0	0	0	0	0
Grain sorghum, second crop	1.0	1.0	0	0	0	—	—	—	—	—
Soybeans, second crop	0	0	9.3	52.2	91.2	6.3	7.5	7.5	7.5	7.5

PROGRAMING PROFIT IN GEORGIA

Farms in Georgia's southwest coastal plain are characterized by small acreages, limited capital and low returns. Many farm operators have not kept up with changes in technology and economic conditions.

To illustrate the possibilities of improving agriculture and farm income, specialists at the Georgia Agricultural Experiment Station, in cooperation with ERS, recently did a study in programing of typical general crop and crop-livestock farms.

In setting up the possibilities, they selected five farm sizes averaging 25, 85, 200, 400 and 750 acres of open land. Well over half the farms in southwest Georgia are in the two smallest size groups. Under optimum farm plans, the crop-livestock farms returned more to the operator than did general crop operations. The range in net returns to land and operator's labor and management on crop-livestock farms was from \$1,250 for the 25-acre farms to \$32,400 on the 750-acre farms.

On the general crop farms, net returns ranged from \$1,180 to \$32,250.

Enterprises considered included cotton, peanuts, corn, grain sorghum, wheat, oats, soybeans, pine trees, beef cows, calves (sold at weaning, fattened on winter pasture or finished in drylot) and hogs. In addition, grain sorghum and soybeans were considered as second crops following the small grain or winter pasture.

Using 1962 allotments and product prices, the cotton acreage was restricted to about 11 per cent of the cropland and peanuts to about 22 per cent. Wheat was limited to 15 acres per farm.

On the crop-livestock farms, hogs were in the optimum farm plan for all size operations but beef cows were omitted from the smallest size farm. The way in which beef cattle were handled varied—winter grazing tended to be more profitable on the 400- and 750-acre farms. No plan included the sale of calves at weaning as the most profitable alter-

native for livestock.

While cotton and peanuts were in the optimum plans to the full extent of acreage allotments for both types of farms, the land used for permanent pasture on the crop-livestock operations with 85 or more acres shifted to pine trees on the crop farms.

All farms except the 25-acre size included the full 15 acres of wheat. On all five farm sizes, one-half of the wheat was followed by a second crop of soybeans. Corn occupied the acreage remaining after allotments for cotton, peanuts and wheat were filled on the 400- and 750-acre crop operations.

With capital assumed unlimited at 6 per cent interest, the general crop farms required considerably less investment than did the crop-livestock farms. The range was from \$5,800 (25 acres) to \$124,100 (750 acres) for general crop production. Capital investment was from \$6,600 to \$167,800 for crops and livestock. (1)

Advantages of Small Farmer-Feeder May Hold Key to Expanding His Feedlot

Despite keen competition from large-scale western feedlots, the midwestern farmer who finishes small droves of cattle is usually able to stay in business. Why? Because his cattle feeding operation is a side line to other crop and livestock enterprises and it uses feed, labor and buildings that otherwise would be idle during the late fall and winter months. On this basis, a small return still adds to net income.

Some farm production specialists feel that the side line cattle feeding enterprise offers the farmer enough advantages to make it worthwhile for him to expand his feedlot into a major operation. In order to explore such a possibility, economists in Illinois calculated the costs and returns for a large feedlot designed especially for a midwestern crop and livestock farm.

To find out what type of feeding operation would be best for the feedlot, four feeding programs were budgeted. They included long-fed steer calves, long-fed yearlings, short-fed yearlings and short-fed common to medium cattle. Reasonably good management, use of the lot at capacity, and levels of cattle prices and margins near the average during 1952-60 were assumed.

Comparison of the costs and returns in each budget indicated that the short-fed cattle, common to medium grade, would make the most money for the farmer. Total costs for producing 1,000 head per year were estimated to be \$158,116 excluding the initial cost of the feeders. Three-fourths of this total went for feed. With gross returns at \$174,420 (adding credit for manure to cattle sales and subtracting the cost of the animals), the return to management was \$16,304.

An estimated \$120,000 invested in the lot included the cost of

conventional sheds, tower silos and electrically powered feed handling equipment. A cattle feeding enterprise of this size could fit into a farm operation with 300 to 400 acres of cropland, provided that the operator buys his grain.

With the facilities as planned, the feedlot has several advantages. The silos permit grain to be bought at harvest when prices are lower. With the electrically powered equipment the farmer can handle most of the work himself. And, the plan is well suited to step-by-step expansion. The operator could start with a pair of silos and other facilities for 250 head of cattle and make additions in 250-head units. (2)

Demand for Beef Expected to Climb 50 Per Cent by Time 1975 Rolls Up

The structure of the beef producing industry is changing rapidly and more change is ahead if U. S. population expands and per capita income increases as currently projected.

By 1975, U. S. population is expected to reach 226 million and per capita income may well be up a fourth. Based on these figures, total demand for beef could be a half larger by 1975.

Since 1950, the beef industry has changed considerably. Major developments have been a growing concentration of meat retailing in chain stores and supermarkets, an increasing proportion of cattle fattened in feedlots before slaughter, an expansion of large-scale feeding in the West and the rise of the Southeast as a supplier of feeder cattle.

About 90 per cent of all food sales are now made through chains and through affiliated independent supermarkets. These outlets emphasize specification buying of beef—carcasses from fed cattle, relatively light in weight, uniform in size, good or choice in grade and lean on the

outside of the carcass.

To meet retailers' quality specifications, the proportion of cattle fattened in feedlots rose from 40 per cent in 1950 to 55 per cent in 1962. By 1975, fed cattle may account for 75 per cent of all beef. Moreover, the specifications are causing cattle feeders to concentrate on improved production methods and on providing a steady supply of fed cattle throughout the year.

During the past 10 years, cattle feeding has increased most in regions outside the Corn Belt. The greatest gains were in the Pacific states (132 per cent), Southern Plains (79 per cent) and the Mountain states (69 per cent). A moderate increase occurred in the Northern Plains (49 per cent). Less change took place in the central Corn Belt (29 per cent) and Michigan-Ohio (32 per cent).

Cattle feeding probably will continue to expand faster than the national average in the Pacific and Mountain regions, about average in the Plains and somewhat slower than average in the Corn Belt.

The South Central and South Atlantic areas may become more important in feeding as they expand cattle production. Recently reduced freight rates permit southern producers to import feed grains from the Corn Belt and they can develop their pastures. (3)

Formula Feed Output Up 75 Per Cent; Farmers Rely Less on Their Own Mixes

In the kitchen they are called convenience foods. Around the barn they are formula feeds. And the farmer has been taking to them with as much enthusiasm as his wife has to cake mixes and heat-and-serve meals.

According to the American Feed Manufacturers Association, the output of formula feeds in the 48 states increased 75 per cent

from 1948 to 1962.

In addition to the figures released by the Association, the Bureau of the Census is now reporting production of formula feeds by states and 33 states are estimating sales of feeds, either in total or by kinds.

For the 1957-62 period, 19 states reported sales by kinds of feed. In 1962, about 16 million tons of commercial formula feeds were sold in the 19 reporting states, a gain of 31 per cent over 1957.

Since World War II, production and sales of hog and beef cattle feeds have increased faster than output of dairy and poultry mixes. State figures indicate that sales of hog feeds went up 67 per cent during the six years ending in 1962. Output of beef cattle feeds gained 60 per cent during the same period.

Commercial formula feeds make up a large part of the total feed fed to livestock and poultry in the eastern, southern and western states. Corn Belt producers rely more on locally grown grain which they mix with high-protein supplements. In the 23 states reporting sales of formula feed during 1962, the quantity purchased was about 330 pounds per grain-consuming animal unit. This figure is about a fifth of the 1,820 pounds of the total amount of all concentrates fed per animal unit during the 1961-62 feeding year. (4)

Life Insurance Companies Led the Rise In Third-Quarter '63 Farm Mortgages

In the third quarter of 1963, the volume of farm mortgage loans closed by three reporting lender groups totaled \$369 million, including the increase in existing loans. This was 30 per cent higher than for the same quarter a year earlier. Life insurance companies recorded the largest gain, an increase of 50 per cent from July-September 1962. Fed-

eral land banks and the Farmers Home Administration reported increases of 18 per cent each.

Farm mortgage loans held at the end of the third quarter of 1963 by these lenders were 11 per cent higher than a year earlier. Outstanding loans increased about 3 per cent during the three-month period. This expansion was due to the larger volume of new lending since repayments on existing loans continued to rise in line with outstanding debts.

Interest rates on the loan commitments of life insurance companies during July-September 1963 were about the same as in the second quarter when they averaged between 5.7 and 5.8 per cent. (5)

Chemical Methods Remove Range Trees Cheaper Than Machines Can Do the Job

Trees on the range today are about as popular as fences were in the Old West. The reason—trees cut down on both the quality and quantity of forage.

A rancher can get rid of the trees in two ways, mechanically or chemically. But the cost of felling trees averages about \$80 while bulldozing them out runs about \$200 an acre—which obviously prices machinery out and chemicals into the picture.

According to the University of California and USDA specialists, 2,4-D is the most effective chemical for the trees and larger shrubs. The cost of removal (including chemicals and labor) ranged from a low of \$2.54 per acre to \$11.50 for trees from three to 11 inches in diameter and 50 to 150 trees per acre.

The per acre cost for labor included time spent in actual application of the chemicals as well as time moving between trees. It also took in the time required for mixing the chemical and filling the sprayer. This step accounted for over one-third of the total time per acre. (6)

Variations in Quality of Range Forage Cause Wide Shifts in Ranch Income

How much is good range forage worth to a cattle rancher? Quite a lot, according to a recent study of the effect of range forage conditions on the cost of ranching in New Mexico. Although gross returns didn't vary so much from year to year, there was a big difference in net income when the rancher had to buy supplemental feed.

In order to measure the effect of good, average and poor years for range forage on ranch income, data from typical cattle ranches in New Mexico were used to budget a typical ranch operation. About 4,300 acres were owned by the operator and 20,750 were leased from the Bureau of Land Management and other sources.

The specialists assumed that a good year for range conditions meant 25 per cent more available feed from the range than the average year; a poor year resulted in 25 per cent less. In a good year, the ranch could carry 465 animal units. In an average year, 423 animal units could be fed and in a poor year, 393 animal units.

With the weather on his side, the rancher could sell a total of 133,980 pounds of beef from his operation for a gross of \$24,931. Costs were \$9,387, the lowest of the three situations, because there was less need for extra feed.

In an average year, the ranch operation could market 117,445 pounds of beef. Gross returns from cattle were \$22,298 and the cash costs amounted to \$9,538.

With poor range conditions, the sale of beef dropped to 108,002 pounds and gross returns to \$20,630. The effect of a bad year on expenses could be eased a little by cutting some of the other costs to the bone, but the bigger feed bill really made a difference. Cash costs with below

average range conditions rose to \$11,232.

After the rancher subtracted his cash costs, depreciation and operator labor, his net ranch income amounted to \$2,293 with below average range conditions, \$5,655 for average conditions and \$8,439 with above average range.

The effect of range conditions on net ranch income compared to the effect on gross returns is even more obvious in percentages. A cut of 25 per cent in feed from the range reduced net ranch income by 59 per cent, while the decline in gross was only 7 per cent. In contrast, a 25 per cent improvement in range forage was keyed to a 49 per cent gain in net income and 12 per cent rise in gross returns. (7)

Modernization of the Poultry Industry Has Increased Need for Improved Data

Today's large-scale egg production and marketing and integrated broiler operations are a far cry from the kerosene brooder and small farm flock. And, as the poultry industry has changed during the last 30 years or so, it has become more and more dependent on accurate, up-to-date statistics.

Poultry and egg data help the poultryman in several ways. In the market, statistics provide the basis for determining prices. When properly interpreted, they take some of the guesswork out of the production and marketing decisions the farmer must make. They help him plan in advance how much he will produce and when he will market his birds or eggs.

Take prices. Day-to-day and week-to-week information on prices for poultry and eggs at the farm, wholesale and retail levels helps buyers and sellers of poultry products to come to terms more easily. This tends to reduce drastic changes in prices to farmers.

Taking some of the risk out of the poultryman's production and marketing decisions also helps to improve his efficiency. This applies to the marketing segment of the industry too. And when the uncertainty is less, firms that supply the necessary inputs and services to the industry, such as banks and other sources of credit, feed manufacturers and hatcheries, benefit as well.

In planning production and marketing in advance, poultrymen have several good statistical indicators. For example, weekly data on broiler chick hatcheries in 22 states permit producers and processors to know what broiler supplies will be three months ahead of marketing. With this knowledge, broiler firms can modify output to a level that should result in the highest profit or least loss.

Another important barometer in broiler production is the number of pullet chicks placed in broiler hatchery supply flocks. This provides a rough guide to how large the nation's broiler

hatching-egg flock will be over the next six to seven months.

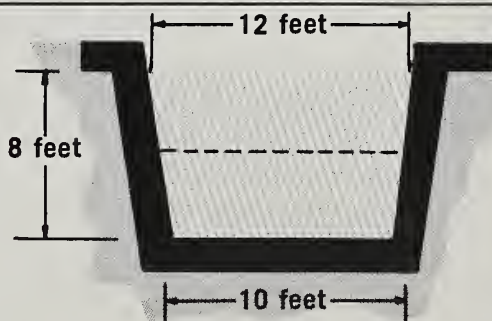
The turkey segment of the industry uses figures on weekly poult hatchings, intentions to keep breeder hens, turkeys tested for pullorum disease, the number of breeder hens on January 1 and intentions to raise turkeys as key indicators. For egg producers, layer numbers (including pullets not of laying age), the hatch of egg-type chicks and the current rate of lay offer pointers on future market supplies.

Specialists in the analysis of poultry and egg statistics use past data to identify and measure the impact of factors influencing supply, demand and prices. For instance, to interpret current developments and to predict the future with reasonable accuracy, they must understand what causes year-to-year and longer changes in poultry and egg production or what is happening to the demand for poultry and eggs. Statistical analysis is also essential in evaluating the impact of government programs. (8)

Here's How: Trying to figure out how long your feed supplies will last? Here's how to calculate the tons of silage in your trench silo. (9)

If the silo is eight feet wide at the bottom and 12 feet wide at the top of the silage, the average width of the part of the trench containing silage is 10 feet. The silage averages eight feet deep and the silo is 50 feet long. Here's the formula to use:

$$\begin{aligned} &\text{Average width} \times \text{length} \times \text{depth of silage} \\ &\times \text{tons per cubic foot of depth} = \text{tons of silage} \\ &10 \times 50 \times 8 \times 0.0128 = 51.2 \text{ tons} \end{aligned}$$



Depth of settled silage	Tons per cubic foot
Feet	
1	0.00925
2	0.00985
3	0.01040
4	0.01090
5	0.01140
6	0.01190
7	0.01235
8	0.01280
9	0.01320
10	0.01365
11	0.01405
12	0.01445
13	0.01490
14	0.01530
15	0.01565

Despite Gain in 1962 Gross Returns, Broiler Growers Got Same Net Income

The typical broiler grower in Georgia just managed to hold his ground during 1962. His net farm income averaged \$777—about the same as a year earlier. Although broiler output per farm was higher and contract returns were up slightly in 1962, the gains were offset by an increase in operating expenses.

Broiler production per farm rose 3 per cent in 1962 over 1961 levels. Returns from broiler contracts averaged \$68 per 1,000 birds sold or 2.06 cents per pound. Contract returns were a dollar less in 1961.

Gross returns from broilers averaged \$1,758 per farm, up \$80 from the previous year. Broiler income generally accounts for four-fifths of total cash receipts on Georgia broiler farms with minor enterprises such as beef animals or hogs supplying most of the remainder.

Gross farm operating expenses came to \$1,841 in 1962, compared with \$1,795 a year earlier.

With net farm income so low, it's not surprising that over half of the operators of Georgia broiler farms and members of their families worked off the farm some of the time during 1962. Gross off-farm wages and other income such as social security or veterans payments averaged about \$1,459 per farm. (10)

Study of Cash-Grain, Livestock Farms Indicates Most Profitable Enterprises

Farmers are doing many things to improve their incomes. Some are shifting to nonfarm employment. Others are combining farming with nonfarm jobs. Still others are reorganizing and enlarging their farms.

To help those who want to stay in farming, researchers recently made a study to find the size of

farms and combinations of land, machinery and resources necessary to enable operators to earn \$2,500, \$3,500, \$4,500 and \$5,500 for their labor and management. The study included cash-grain and livestock farms in Illinois.

Cash-grain farms. Total land requirements ranged from 178 acres (\$2,500 income level) to 308 acres (\$5,500 income level) with 160 to 277 acres of cropland. Total farm investment (largely the land) totaled \$83,000 to \$139,500.

Two crop rotations were feasible in returning the four levels of income—either corn, corn, soybeans, wheat, or corn, soybeans, wheat.

As would be expected, the bigger operation needed larger machinery. Two-plow, two-row equipment was adequate for the \$2,500 and \$3,500 income farms but three-plow, four-row machinery was needed at incomes of \$4,500 and \$5,500.

In order to provide the required incomes, total farm sales ranged from \$14,200 to \$24,500. The return to operator labor and management per dollar of total sales varied from 18 cents at the \$2,500 level to 22 cents at the \$5,500 level. Total farm costs, excluding the operator's labor and management, were from \$11,700 to \$19,000. The largest single cost item was interest on investment capital which amounted to 35 to 37 per cent of all expenses.

Livestock farms. Total land requirements were 162 acres for returns to operator labor of \$2,500, and 304 acres for returns of \$5,500. Cropland ranged from 123 to 231 acres. Average investment ranged from \$67,000 to \$118,900.

The best crop rotation for the livestock farms was corn, corn, soybeans, wheat at the \$2,500, \$4,500 and \$5,500 income levels. This combination was most profitable for 80 per cent of the cropland at the \$3,500 level with the remainder in a corn, corn, wheat

rotation.

Four choices of hog production systems were considered on the livestock farm—a two litter confinement system, a four litter confinement system, a one litter pasture system and a two litter pasture system. Of seven choices in beef cattle enterprises, six were feeding operations differing chiefly in the length of time fed and the remaining possibility was a cow-calf herd.

A two litter pasture system for hogs was followed at all income levels on the livestock farms. The number of litters per year ranged from 37 at \$2,500 to 67 at \$5,500.

The beef enterprise on the livestock farms was the same at all incomes—a cow-calf herd with the calves sold at weaning. In addition, from eight to 16 head of long-fed steer calves were fed at income levels of \$2,500 and \$3,500. Beef feeding was dropped at the two highest incomes because other enterprises were more profitable.

Total livestock farm sales ranged from \$16,800 to \$29,200. At each income level, total sales had to be higher than for cash-grain farms because operator earnings per dollar of sales were lower. The range was from 16 cents at the \$2,500 level to 19 cents at the \$5,500 level. Total farm costs ranged from \$13,600 to \$24,000.

Researchers also assumed that the full-time, year-round labor of the farmer was available. Hired labor could be obtained from April through November and exchange work with other farmers was on hand during peak periods of planting and harvesting.

The quantity of capital was assumed unlimited at a cost of 5 per cent for investment purposes and 6 per cent for operating expenses. The average market value of land was set at \$380 per acre for the grain farms and \$276 an acre on hog farms. None of the crops were restricted by government programs. (11)

Modern Day Farming Causes Increase In Use of Petroleum Fuel and Oil

Farmers purchased more liquid petroleum fuel per farm in the late fifties than ever before. During 1959, they used about 8,610 million gallons. Purchases of liquid petroleum fuel and oil for the farm business came to 6 per cent of total farm production expenses.

During the decade of the fifties, some shifts occurred in the types of petroleum fuel used on farms. Although gasoline remained the major fuel, total use declined in favor of more diesel fuel and LP-gas, particularly for tractors. LP-gas also gained over wood and coal for heating farm homes.

In addition to powering farm machinery, petroleum fuels and products are used extensively for drying crops, brooding chickens, killing weeds and operating household appliances. (12)

Prospective Plantings of Oilseed Crops Indicate Larger Supplies in 1964-65

The March 1 farmers' intentions to plant report showed the prospective 1964 acreage of oilseeds to be 4 per cent over 1963.

Soybean producers plan a record 31.8 million acres, 8 per cent above last season's high. If the proportion of the total acreage harvested for beans is about the same proportion as last year and yields are average, production from the intended acreage would be about 756 million bushels, a new record. A crop of this size would mean 1964-65 bean supplies 10 per cent over 1963-64.

Flaxseed producers intend to plant roughly 3.3 million acres in 1964, 5 per cent less than in 1963. Flaxseed output in 1964 may be around 31 million bushels compared with 31.5 million in 1963. Supplies would be an estimated 45 million bushels, up 5 million.

Peanut plantings are expected

to be 1,526 thousand acres in 1964. Production is estimated at 1,925 million pounds compared with 1,975 million last year.

Supplies of *cottonseed* available for crushing in 1964-65 may be about the same as a year earlier if growers plant the 14.8 million acres indicated. (13)

102,000 Farms in Top Census Bracket Sell One-Third of All Farm Marketings

Only 102,000 farms in the U. S. had \$40,000 or more of gross sales in 1959, according to the Census of Agriculture. These farms accounted for 4.2 per cent of all commercial farms and averaged \$95,000 in value of sales. Most are located in California, Texas, Iowa and Illinois.

About 40 per cent of the 102,000 largest farms were operated by families in 1959. The proportion of family-operated farms in the over-\$40,000 sales group is increasing more rapidly than the larger-than-family farms. Obviously, the larger commercial family farm is a growing part of agriculture.

Although few in number, farms in the over \$40,000 sales group were responsible for nearly a third of total agricultural marketings during 1959 compared with only 16 per cent 20 years earlier. This increase was due more to the expanding number of farms in this group than to gains in the value of sales per farm.

In total, the big farms sold 34 per cent of all crops and 31 per cent of all livestock and products in 1959. By product, they marketed 67 per cent of all the vegetables, just under 60 per cent of the forest and horticultural products and about 54 per cent of all fruits and nuts.

When the big farms were grouped according to type of production instead of marketings, most of them were livestock and cotton operations. (14)

Prices for Corn, Sorghums, Oilmeals Expected to Cut Poultry Ration Cost

The poultry farmer's feed bill may be a little easier on his bank account this spring and summer compared to 1963.

Although the cost of poultry feeds from November 1962 to October 1963 averaged somewhat higher than a year earlier, the gradual rise in prices has lost momentum. Poultry rations that cost 15 cents per 100 pounds more in January-April 1963 than they did a year earlier were the same as 1963 levels by mid-March.

Prospects for the same to slightly lower poultry feed prices stem from the fact that average prices for corn and grain sorghums aren't expected to rise as much as in 1962-63. And, the cost of high-protein feeds should average near 1963 levels due to larger supplies of oilseed meals and less used for livestock. (15)

Gain in Cattle Feeding Likely to Boost 1964-65 Grain-Consuming Animal Units

The number of grain-consuming animal units to be fed in 1964-65 is currently expected to be around 172 million, compared with 170.3 million in 1963-64.

A small increase is expected in cattle feeding. All cattle and calves on farms January 1, 1964, were up 3 per cent from the previous January and beef animals were up 5 per cent.

1964-65 poultry production, in terms of grain-consuming animal units, is likely to remain near current levels. Egg production may be about the same as 1963-64 but output of broilers and turkeys may go up a little.

Hog feeding is expected to continue below a year earlier during the remainder of the 1963-64 period. The number on Corn Belt farms was down 5 per cent this March compared to last, the winter pig crop was off 5 per cent and

a 7 per cent cut in March-May farrowings is likely. Farmers report 13 per cent fewer sows for farrowing in June-August.

January 1 milk cow numbers were 3 per cent below the 1963 figure and a further decline is in prospect. Feeding rates per head should continue to rise. (16)

Colorado-Big Thompson River System Provides Extra Water for Area Farms

A transmountain water diversion system is bringing higher crop yields to northeastern Colorado.

The main feature of the system is the Adams Tunnel, designed to channel up to 400,000 acre-feet of water a year from the Colorado River on the western side of the Continental Divide to water-short farmlands on the eastern side.

The tunnel is only part of the Colorado-Big Thompson Rivers irrigation system, which began water deliveries on a significant scale in 1954.

To find out what changes the new water supply has brought to agriculture in the Northern Colorado Conservancy District, ERS and Colorado Agricultural Experiment Station economists surveyed 150 farmers.

They found that the rate of water use per irrigated acre more than doubled, from 0.9 acre-feet to 2.0 acre-feet between 1951-53 and 1959-61.

Farmers had shifted from crops using little water, such as small grains, to such crops as corn and sugarbeets.

No longer plagued by crop losses from drought, more farmers invested in fertilizer. Eighty-nine per cent of the irrigation farmers surveyed fertilized their crops in 1959-61, compared with only 41 per cent in 1951-53.

Average yields for all the important irrigated crops, except dry beans, were higher in 1956-60 than in 1950-54. (17)

HIGH-PRICED NECESSITY. Land is the farmer's most basic tool. Its price has been trending upward over the years. Last year, economists estimate the average price of an acre of farm real estate (land and buildings) reached a new high of \$129.79—nearly 90 per cent more than 15 years ago. The 1963 figure is 220 per cent more than the price of an acre 50 years ago; 700 per cent more than was paid in Civil War days. (18)

Year	Value of land and buildings	
	Per acre	Total
	Dollars	Million dollars
1850	11.14	3,272
1860	16.32	6,645
1870	18.26	7,444
1880	19.02	10,197
1890	21.31	13,279
1900	19.81	16,615
1910	39.59	34,793
1920	69.37	66,310
1930	48.52	47,873
1940	31.71	33,636
1950	64.96	75,255
1960	116.48	129,929
1963	129.79	143,638

Analysis of Change in Prices for Land Helps Gauge Value of Irrigation Water

How much is irrigation water worth? Selling prices for farms can be useful indicators of such worth because they reflect the values of irrigation water received as well as different kinds of land.

Looking at land alone, the value of irrigated land in northeastern Colorado as measured by farm sale values was about \$148 per acre between 1954 and 1960, according to a recent cooperative

report by ERS and Colorado State University economists. In comparison, each acre of other land (dry, waste and grassland) added only \$27 to sale values.

Analyzing water values was more complicated, mainly because irrigation water is available from several sources. Most of the irrigation water in northeastern Colorado is supplied by irrigation companies from natural stream-flow within the South Platte Basin. Some supplemental water is provided by the Colorado-Big Thompson Project, which diverts water into the area from the western slope of the Rockies through a system of tunnels. During the 1954-60 survey period, the estimated value of water supplied by irrigation companies, as reflected in farm selling prices, was roughly \$21 per acre-foot. The estimated value of the C-BT water was close to \$26 per acre-foot. Additional water pumped from wells on farms ranged near \$29 per acre-foot in value.

Sale prices for farms analyzed in this study were obtained from various kinds of records on farm transfers occurring between 1954 and 1960. Transactions for detailed study were limited to those in which the farms sold were larger than 40 acres and in which the buyer and seller were not related. Also, the transaction must have been open market.

Using these criteria, 337 farms irrigated with ditch water and water from the Colorado-Big Thompson system were selected for the study. About 70 out of these 337 farms also had irrigation wells. On the average, the farms received 22 inches of company water and roughly 5 inches of supplemental C-BT water for each acre irrigated annually.

Major crop enterprises on the study farms include sugar beets, beans, potatoes, alfalfa, corn, small grains and some truck crops. Cattle feeding is important and there is some sheep feeding in the area. (19)

More Meals

Who sat at the farmers' dinner table last year? A total of 31 persons including himself. Five of them were foreigners.

In 1962, roughly 29 people were supplied farm products by one farmworker. Four lived abroad. The 1963 gain was due partly to an upswing in farm exports. (43)



ASPECTS OF POVERTY

Farm machines spell progress for most, poverty for some

The nation is beginning to realize that it has a new kind of poverty on its hands, poverty that has not responded to decades of general prosperity.

According to the last census, for example, median income of urban families was \$6,166 compared with \$3,228 for rural non-farm families. A third of all rural families had incomes under \$2,000 compared with a tenth of urban families in this bracket.

Modern farming and modern methods in other rural industries have eliminated a lot of the hand labor once needed in rural areas. With fewer farm jobs, more and more rural persons migrate to the city.

In the rural areas, machines replace men as technical changes come to traditionally rural industries—farming, lumbering and mining.

In 1940, for instance, more than 20 billion man-hours of labor went into farming compared with about nine billion today. In that same period, farm production increased 54 per cent.

To create more jobs and raise low incomes, President Lyndon B. Johnson has called the agencies of his administration into battle with poverty, an opponent long familiar to farmers.

In Lincoln's time, national leaders and economists were concerned with distributing public

lands to farmers and developing agricultural schools.

In the 1920s, most farm leaders endorsed cooperatives as the way to gain prosperity for the farm population.

The 1930s called for emergency programs to combat the double crisis of depression and drought.

The 1940s brought the abnormal demands of war and reconstruction. For most of the decade, anyone who wanted to work usually found a job with good pay.

After the war and during the 1950s, while the government wrestled with commodity prices and production problems, poverty in some rural areas increased.

Today's rural poverty, with its background of national prosperity and advanced farm technology, poses different problems for local and state governments. The backwater areas need better schools, new industries and more help than the towns and counties themselves generally can provide on their own.

To combat this poverty, USDA has established new programs and strengthened old ones. The Farm Bill of 1962, for example, authorized a broader attack on rural poverty. USDA programs and the Area Redevelopment Administration have created about 40,000 new jobs, but this number barely scratches the surface of joblessness. Many times this number of new jobs is needed to supply full employment for the rural unemployed.

A new job can be created for about \$3,000 of government funds when combined with private capital for investment in new enterprises. With this yardstick, it would take about \$3 to \$4 billion of government money to catch up with unemployment of rural people. (20)

Statistics on homes in region reflect long-standing problems

The economic pall over Appalachia has shown up in an unusually high percentage of run-down homes in the region.

According to a study by the Economic Research Service, the number of homes that need major repairs or homes that should be torn down is significantly above the average for the nation as a whole.

The study covered 322 counties in Appalachia, a region that spreads southwest from Pennsylvania, the eastern arm of Maryland and most of West Virginia, on through parts of Virginia, Kentucky, North Carolina and Tennessee, and finally fades out in the northern parts of Georgia and Alabama.

The researchers classed the houses by the state of repair and the plumbing facilities, rating them as sound, deteriorating or dilapidated.

A house considered sound had only slight defects easily corrected by regular maintenance. When they were described as deteriorating, the houses needed



serious major repairs. A dilapidated house endangered the health or safety of the occupants. The defects were so severe the homes needed to be rebuilt or torn down.

Eight out of every 100 houses in the region were dilapidated, and 19 were deteriorating, compared with five and 14 respectively for the U.S. as a whole.

Only 87 per cent of the houses in the Pennsylvania region of Appalachia were fully equipped with plumbing. The rest of the houses lacked piped hot and cold water, flush toilets or an indoor bath or shower. Even so, the Pennsylvania homes were better equipped than houses in the other parts of the region. In Georgia, for instance, only 69 per cent of the houses had all the basic plumbing fixtures.

The quality of the houses in Appalachia also shows a geographic pattern. The best houses were found in the northern reaches of the region. Quality deteriorates on the way south, then picks up again at the southern tip. But it never quite gets back to the level of housing in the northern part of the region.

As is true of the U.S. as a whole, the poorest housing was in the rural areas, rather than in the cities, though farm houses were in a little better shape than non-farm houses in the country. But whether in the city or in the country, housing in Appalachia was generally inferior to housing in the rest of the nation. (21)

Mountainous land is basis of W. Virginia's farm troubles

West Virginia's mountainous slopes make for picturesque scenery, but backbreaking and profitless farming.

With more than three-fourths of the land area pitched at better than a 24-per cent slope, modern farm equipment is nearly useless.

It's no wonder that so many of the farms in the area are too small to offer anything but a bare subsistence to the operators. Of the 52,000 farms in the state, 45,000 are too small to have any prospects of producing successfully for today's markets.

To enlarge the farms would call for more skilled labor and experienced management and more working capital than the mountaineer farmers could get their hands on readily.

The squeeze on West Virginia farming shows up in a recent study conducted by ERS. The project analyzed the status of 422 low-income farms in the state to determine their chances for financial success. The report wasn't too encouraging.

For one thing, an unusually high proportion of the area's farmers were well into middle age if not beyond it; more than half the farmers were 65 or older. As is true of most low-income areas the young adults have been leaving the community in search of work elsewhere. The result is that many of the farmers in the

region were too old to want to change or improve their situation.

Furthermore, West Virginia's farms are more apt to be run by a woman alone or by a disabled man than are farms in the rest of the country. The odds are against all three—the older man, the disabled one or the woman—being able to make a success of the farm.

Given the characteristics of the population and the economic conditions in the area, it isn't surprising that only 2 per cent of the low-income farmers were willing to mortgage their farms to expand their operations, a necessary qualification in today's agriculture. It was, in fact, a rare farmer in this group who even realized that it might be possible to increase the income of his farm.

The state and federal governments have been trying to improve the general economy of the area by developing available resources, upgrading the established ones and bringing capital in from the outside.

One government project is the attempt to stimulate the forest industry in the area. Once restored to high productivity, the lumber industry could support some 37,000 workers, according to the Forest Service. That's more than seven times the number the industry employs today. But a project such as this one will take years to pay off.

The most important investment West Virginia could make is in

better education. West Virginia's current expenditure per student is \$298, compared with the national average of \$432. To bring its educational plant up to the level of the rest of the nation would take \$80 million-plus a year. (22)

One Solution to Rural Unemployment Is Out-Migration of Educated Youth

Over one-third of the 16- to 65-year-old men were unemployed at some time in 1962 in Hill County, an imaginary name for a rural county in Indiana where there are too few jobs, too little income.

A study by the U.S. Department of Agriculture and Purdue University showed that unemployment rates were highest for the young men under 25 and lowest for middle aged men. And men from 25 to 34 experienced more layoffs than those from 35 to 44.

Out-migration of younger people is the easiest way to relieve the strain on the labor market in an area like Hill County. But unless these young people have the education and technical training to compete for available jobs in other communities, unemployment will just be transferred from one area to another. (23)

Women Want the Comforts of Home During Their Vacations in the Country

The ladies like the great outdoors but they aren't much inclined to rough it. Even on a farm vacation, they still want all the conveniences—indoor plumbing and hot water, at a minimum.

And because wives have an important vote—if not absolute veto power—in choosing a vacation spot, farmers would do well to plan their vacation projects with the women in mind. The farmer who offers guests a combination of activities appealing to all the family betters his chances of making money from recreation.

Young guests may enjoy horseback riding, hiking and swimming, while the parents might prefer just sitting around and looking at the scenery or going for a drive.

Variety applies to the food, too. Most successful vacation farms offer the guests a variety of good, wholesome food.

Spotless linen and bedding is another way to appeal to the woman in the group. And she is apt to show her appreciation by bringing the family back to the farm next season. (24)

Making Money from Rural Recreation Can Be a Delicate Business Operation

When the farmer abandons his crops and moves into the recreation business, he is getting himself into a whole new world of business requirements.

Unlike the row of tomatoes or field of wheat, customers talk back. The farmer has to be prepared to cater to their preferences within a wide range of individual caprice.

The farmer must also find some way to set a reasonable price on his services. Too high a price tag on a farm vacation or hunting rights and there won't be any customers. Too low and the profits vanish. It isn't easy to set the right price in an unfamiliar market but investigation of similar activities will help.

He will have to help create a demand for a recreation service if he expects to make it pay. (25)

Walking and Driving

What's your favorite outdoor recreation? Chances are it's either taking a drive through the country or walking in the woods.

Surveys indicate that pleasure driving and walking account for 42 per cent of the outdoor recreation activities we enjoy during a year. (26)

Lack of Money Is Major Barrier for Farm Youth Desiring Higher Education

The biggest reason farm youth decide against college is because they figure they can't afford it.

According to a 1962 survey of 160,000 high school seniors, 47 per cent didn't intend to go on with their schooling. About four out of 10 of the students said the reason was they didn't have the money. Nearly as many students in the 30 states surveyed based their decision not to go on to college on such other reasons as poor health or marriage plans.

One student out of 10 said military service would prevent continuing his education and an equal number simply weren't interested in college.

An increasing number of farm parents are willing to go into debt to send their children to college.

Between 1957 and 1962, almost 9 per cent of the farmers included in the survey had received some sort of financial assistance to educate their children. Seventy per cent of these farmers had bank loans for this purpose and another 23 per cent got help from scholarships and gifts from relatives. Only 5 per cent received loans from the colleges and about 2 per cent were aided by the National Defense Education Act.

Money alone isn't the only barrier to a college education for rural youth. A lack of information keeps many a farm boy or girl out of school. Students in rural high schools need better vocational counseling, for one thing. They need to be made aware of the amount of education it takes to qualify for technical and vocational careers and of the advantages of making an investment in education.

But even with better guidance programs, many more low-interest loans will have to be made available to help rural youth get the training they need to compete in today's labor market. (27)

THE FARM POPULATION

The population parade from farm to city has been so well documented that it is easy to overlook the fact that changes have meant different things to different parts of the country.

In the first decade of this century the farm population represented more than a third of the nation; today it is less than 8 per cent.

But not all regions or states fit neatly into this national pattern. As late as 1950, for instance, more than half the population of Mississippi lived on farms and a third do even today. It's a distinction Mississippi shares with the Dakotas.

At the other extreme are Rhode Island, Massachusetts, New Jersey, Alaska, and Connecticut. Farmers and their families made up only 1 per cent of the population in these states in 1960.

The regional differences are notable, too. While the North Central states, for example, have seen farms get fewer and bigger since the 1920s, with more machines replacing workers, the general nature of farming in the region has

not changed very much at all.

In the South, by contrast, the declining farm population reflects a radical change in farming. Hundreds of thousands of small crop farms have been converted to forestry or combined into fewer but larger livestock farms. Many have been lost as the pattern of numerous tenant farms has given way to big, non-tenant mechanized operations.

While the nation as a whole has watched the steady decline in the farm population, the number of farmers was actually increasing in several states as recently as the late thirties. Texas, long the ranking state, didn't reach a peak in its farm population until 1933, and North Carolina, now the No. 1 state, reached its maximum even later—in 1939.

Unlike many of its sister states in the South, North Carolina's farming has depended mainly on tobacco, an intensive hand labor crop grown on numerous small acreages.

Alaska stands apart from all other states in its population trends. It is the only state in the

union which appears to have increased its farm population between 1950 and 1960.

The national figure obscures other local variations. The Hawaiian farm population was only 12,000 persons in 1960. But the majority of the island farmers and nearly all the farm workers live in villages or towns. Thus, while the farm population was only 1.9 per cent of the state's total in 1960, agricultural workers represented 5.8 per cent of the total labor force.

The five leading states in terms of absolute numbers for farm population in 1960 were: North Carolina, 950,000; Texas, 806,000; Iowa, 703,000; Mississippi, 680,000; and Minnesota, 624,000. The farm populations represented from 18 per cent to 31 per cent of the total for four of these states, but in Texas it was only 8 per cent.

The five states with the smallest farm populations in 1960 were: Alaska, 3,000; Rhode Island, 6,000; Hawaii, 12,000; Nevada, 13,000; and New Hampshire, 22,000.

In these states, the ratio of farm people to the total population was less than 1 in 20, or 5 per cent. (28)

Area	1920			1940			1960		
	Total population	Farm population		Total population	Farm population		Total population	Farm population	
		Number of persons	Per cent of total		Number of persons	Per cent of total		Number of persons	Per cent of total
	Thousands		Per cent	Thousands		Per cent	Thousands		Per cent
United States (including armed forces)	106,089	31,974	30.1	131,820	30,547	23.2	180,007	15,635	8.7
Regions:									
Northeast	29,669	2,537	8.6	35,977	2,411	6.7	44,678	1,119	2.5
North Central	34,197	10,158	29.7	40,143	9,349	23.3	51,619	5,836	11.3
South	33,242	17,063	51.3	41,666	16,400	39.4	54,973	7,160	13.0
West	8,981	2,216	24.7	13,883	2,387	17.2	28,053	1,520	5.4
Geographic divisions:									
New England	7,428	633	8.5	8,437	623	7.4	10,509	232	2.2
Middle Atlantic	22,241	1,904	8.6	27,540	1,788	6.5	34,168	887	2.6
E. North Central	21,644	4,953	22.9	26,626	4,638	17.4	36,225	2,821	7.8
W. North Central	12,553	5,205	41.5	13,517	4,711	34.8	15,394	3,015	19.6
So. Atlantic	14,046	6,496	46.2	17,823	6,060	34.0	25,972	2,838	10.9
E. South Central	8,901	5,257	59.1	10,778	5,283	49.0	12,050	2,494	20.7
W. South Central	10,295	5,310	51.6	13,065	5,057	38.7	16,951	1,828	10.8
Mountain	3,340	1,179	35.3	4,150	1,118	26.9	6,855	678	9.9
Pacific	5,641	1,037	18.4	9,733	1,269	13.0	21,198	842	4.0

A Tighter Control of the Mississippi Can Spur Economic Growth in Delta

Man versus the Mississippi—the struggle against the big river goes on.

In 250 years of trying to control the Mississippi's floods, man has learned one lesson: flood control is never absolute. In addition to the past problems of flood control, drainage and land clearing, the present has emphasized others—preservation of valuable riverfront lands by stabilizing riverbanks and preventing meander.

Cities and heavy industries in the Delta need greater protection from the river than did farm land with the familiar Delta crops: rice, cane and cotton. The switch from cotton farming to ranching in many areas of the Alluvial Valley also requires a higher degree of land reclamation of a different

character, involving new concepts of flood control, drainage and irrigation.

The future should see tremendous social and economic growth in the Delta if stereotyped patterns of agriculture and the threat of the river can be curtailed.

The Alluvial Valley has water transportation, almost inexhaustible water supplies, a good market position and abundant raw materials—everything necessary for industry.

Research in bottom-land hardwood forestry may open the way for a more effective economy in the backwater areas. The wealth of fish and wildlife coupled with the attractions of the river and its lakes and game lands could make the Delta a major recreation area.

The Delta has some 30-odd million acres of land with almost limitless potential—if man can get tighter control over the Mississippi. (29)

MANY FARMERS ON URBAN FRINGE FACE INCREASING TAXES

In an expanding economy, cities need space to grow. But as they grow, the farmer on the urban fringe faces a series of new problems, among which are higher taxes.

Often he ends up paying property taxes that are two or three times higher than they were before city families started moving in. The taxes may force him to sell the land to speculators who can better afford to hold out until the time for development.

Between the time of sale and development, the land may lie idle, contributing nothing to agriculture or to the economy as a whole.

A number of states have tried to solve the problem with special tax policies. The policies ease the burden on fringe area farmers while still allowing for growth of the city.

The most common policies so far have provided for a limita-

tion on assessments as long as the land is being farmed. These programs, however, have proved hard to administer.

Another approach less widely used provides only for a deferral of tax. When the land is developed, the tax comes due.

To be most effective, any approach to the problem of taxes on the urban fringe should be worked out as part of an overall land-use program.

Not all the farmland around a growing city can or ought to remain in agriculture. Some of the land is better suited to urban or industrial development, to highways or parks or other uses. Preferential tax treatment for farmland needs to take into account the best interest of the whole community.

It is to the farmer's advantage to join forces with his neighbors in the city to work out plans for the fringe areas. (30)

Operators of Recreation Enterprises Depend on Weekend Guests for Income

New England farmers who turn to recreation projects to supplement their incomes depend heavily on weekend guests. With the exception of summer camps and vacation farms, the weekend guests account for 70 to 90 per cent of the total income for the bulk of the recreation revenue.

According to a recent ERS study, which covered 30 recreational enterprises in Connecticut, Massachusetts, Maine and New Hampshire, 70 per cent of the enterprises were operated by the original owners. Twenty per cent of the establishments had been taken over by relatives, and the remaining 10 per cent were managed by persons with no previous experience in the business.

The enterprises studied were as varied as vacation farms, pony rides, hunting and fishing areas and riding stables. The list also included golf courses, bowling alleys and summer camps, plus resort and amusement centers.

To get these projects moving, some farmers invested as much as \$200,000 in their business while others invested as little as \$5,000. There was a sharp difference in profits, too. One owner of a summer camp cleared \$25,000 last year while another owner of a resort went into the red by \$9,000.

Whether they were making a profit or facing a loss, the operators faced common problems.

A rainstorm, for example, can cut deeply into the profits of a pony ride as well as a riding stable. Local public health requirements, such as providing safe drinking water and building sewage disposal systems, put an equal strain on summer camps or vacation farms, and most of the operators of hunting grounds complained about game laws that included bag limits for deer, duck and other game. (31)

As chemists change character of farm fats and oils, economists see bright future in new markets for . . .

THE GLAMOUR GLOBULES

Research chemists are busily remaking the world—the world of molecules in a drop of oil.

Result?

For U.S. farmers, new markets for up to 72 million pounds of fats and oils by 1967.

For U.S. consumers, fresher bread, lighter cakes, smoother ice cream, even protective coatings that are simply eaten along with the meat, cheese, dried fruits and other foods they protect.

By changing the molecular structure of animal fats and vegetable oils, chemists can give them many marketable properties that nature didn't provide. USDA's Agricultural Research Service has been working in this area for some time.

Once farm fats and oils have been chemically modified, the next question is up to the economist: What is the sales potential?

The question is particularly important for farm fats and oils, since producers can't look forward to much expansion in present markets, aside from what's created by normal population growth.

A new ERS study assesses the potential for modified fats and oils in four different uses:

Food emulsifiers. The biggest market—61 million pounds in 1962—an increase of only 13 million pounds is seen for 1967.

Emulsifiers are the active agents that make water and oil mix smoothly by suspending fine droplets of one within the other. The food industry also uses the term emulsion for suspension of any solid in any liquid.

Emulsifiers are what make bread fine-grained and longer lasting. They trap air in cake mixes, making them larger, lighter and tastier.

They make ice cream taste creamier.

But because emulsifiers are used mostly in higher calorie foods, this market will probably grow only in proportion to population.

Confectionery coatings. A 16 million pound a year market for vegetable fats and oils in 1962, "chocolate" coatings for candy and other confectionery coatings should take 30 million pounds more by 1967.

The confectionery industry has long searched for a substitute for chocolate and the other component of the cocoa bean, cocoa butter. First, because cocoa butter comes from cocoa beans, an imported product, and prices fluctuate widely. Then too, cocoa butter has some undesirable physical characteristics—it melts in warm weather, making candy hard to ship and store; it's hard to temper to different melting points and consistencies; and it tends to make the chocolate candy surface turn gray after awhile.

The modified vegetable fats still have some undesirable traits, too. But the projected market expansion is based on their being ironed out by 1967.

Protective edible coatings. Still virtually unexplored, this market could provide the largest gains for the modified fats and oils. From almost nothing today, it could grow to 27 million pounds in the next four years.

Protective coatings are used on many foods, notably meats, fish, nuts and cheeses, to guard against outside contamination, reduce dehydration and cut down stickiness. But most coatings now in use are inedible and have to be removed before the product is cooked or eaten. The advantages

of an edible coating are obvious.

But here again the vegetable coatings still have to be improved. Right now they're not as transparent as inedible wrappers. They're fine on frozen meat, but tend to crack as the meat thaws. However, it's hoped these drawbacks can be worked out.

Edible food lubricants. An increase of 7 million pounds over the 17 million used in 1962 is forecast by 1967.

Edible lubricants are used on machinery that contacts food—in case traces are accidentally picked up by the food particles.

Mineral oil is widely used in bakery products. It's cheaper than vegetable oils, but it has no nutritional value.

The vegetable oils, on the other hand, turn rancid rather quickly. And they polymerize—a molecular reaction that changes their physical characteristics.

Since food lubricants are used almost entirely to produce bakery and confectionery goods, market growth depends on the sales increase in these products. Sales have been rising about 2 per cent a year. (32)

Crushings Below Last Year's Record As Farm Prices for Soybeans Climb

Farm prices for soybeans were higher in the first six months of the 1963-64 marketing year, compared with last year, mostly because producers withheld beans from market.

In October-March a bushel brought an average of \$2.60, compared with \$2.36 a year earlier. However, forecasters see a decline to an average of around \$2.45 in April-September.

With fewer soybeans marketed, crushings for the entire year should run around 440 million bushels, 35 million below last year's peak.

Paying higher prices for soybeans but getting no more for their products, crushers have

found their margins getting smaller. They have been running 4 cents a bushel compared with 22 cents in 1958-59.

Demand for soybean oil is up slightly, but supplies are greatly in excess of market outlets. Oil prices are expected to remain steady while meal prices should continue relatively high. (33)

Tall Oil Output Should Hit Record High In 1964 with Rising Consumption Likely

Tall oil production will probably set a tall record in 1964, totaling more than 1 billion pounds, and consumption will likely keep pace with this increase in output.

Tall oil, which gets its name from the Swedish word for oil of pine—Tallolja—enjoys a unique price advantage over other drying and vegetable oils.

In the last 10 years, tall oil prices varied only 1.6 cents per pound, from 2.0 to 3.6 cents. Linseed oil prices fluctuated by 1.9 cents a pound, between 12.7 and 14.6 cents, while soybean prices varied by 4.5 cents per pound, from 8.8 to 13.3 cents.

In addition to its low and relatively stable price, tall oil has been available at times when vegetable oils were scarce.

Tall oil is a byproduct of the sulphate paper industry which produces kraft paper and some newsprint. In the pulping process, the pulpwood is debarked, chipped and cooked in a weak sulphuric acid solution. The gums from which tall oil is made are skimmed off after the cooking is completed.

Whole tall oil is a natural mixture containing almost equal amounts of rosins and fatty acids which are separated by fractional distillation.

Tall oil fatty acids are used as raw material in a wide range of products—protective coatings, laundry soaps, detergents, and chemical intermediates, among others. About half of the tall oil rosins produced are used in paper

sizing. Other uses include gloss oils, ester gums, resinates, adhesives and the like.

Tall oil rosin output last year was 510,000 drums, about 24 per cent of total rosin output. Its prices are relatively stable compared with the fluctuating prices of gum rosins and it is much cheaper than other wood rosins.

Future prospects of the tall oil industry are obviously tied to the sulphate paper industry. As the demand for paper and newsprint increases, the sulphate industry will continue to expand, making possible increased production of tall oil.

Tall oil should become an increasingly important source of rosin, and to a lesser extent of fatty acids. Prices will probably continue to edge up as they did during 1960-63 but tall oil will likely maintain its price advantage over vegetable oils and wood rosins. (34)

Truckers Compete Among Themselves For Exempt Farm Commodity Business

Truckers who haul exempt farm products in interstate commerce say their biggest competitors aren't the railroads, or even the big truck lines. They're other small operators like themselves.

With these findings, a new ERS study sheds a little more light on a little understood area of transportation—small trucking firms that aren't regulated by the Interstate Commerce Commission.

So long as they haul certain agricultural commodities, these truckers are exempt by law from ICC regulation of rates and routes. Unlike regulated firms, they can come into and go out of the transportation business at will. They must adhere only to ICC safety regulations. Since they don't have to file operating reports with the ICC, or even state commissions, not much is known about them. Yet virtually all types of farm products are

moved by exempt for-hire truckers.

Because they play such a large role in agriculture, ERS has been studying various aspects of the operations of exempt for-hire carriers. The new study shows how these truckers get their business, how rates are determined and who their competitors are.

Findings are based on personal interviews with 187 trucking firms in all parts of the country. About a fourth of the firms were primarily non-transportation businesses, but their trucks were available to haul exempt commodities when they were not needed for regular business.

Of the firms contacted, 44 per cent said they get their business by relying on a call from the shipper. Another 7 per cent are contacted by the receiver. The rest rely on truck brokers, solicit business from the shipper or use a combination of various methods.

When it comes to establishing rates, about half of the 187 firms said they make up their own rate schedule. About 15 per cent of the truckers indicated shippers lead in establishing rates; another 15 per cent cited truck brokers in the same role. Rates are negotiated—between trucker and shipper or in a three way conference with the receiver—by 13 per cent of the truckers. Only 5 per cent of the firms said receivers alone determine rates.

Most firms said their rates don't change from season to season. Neither does their business volume. They reported no extremely busy or really slack season.

As for competition, 56 per cent of the firms said it comes from other truckers operating under the agricultural exemption. Eight per cent cited ICC-regulated truckers as their competition; 10 per cent said private trucks. Railroads were listed by 12 per cent.

On the other hand, 14 per cent of the firms said they had no competition at all. (35)

JAPANESE IMPORTS OF MOST MAJOR FARM PRODUCTS TO EXPAND BY 1975

Import commodity	Actual 1960	Projections to— ¹		
		1965	1970	1975
		Million dollars		
Wheat	177	170	191	217
Rice	20	—	—	—
Cotton	431 ²	390	429	466
Tobacco	14	41	81	109
Corn and other feed grains	138	223	383	595
Oilseeds	184	321	482	658
Tallow	25	27	25	24
Hides and skins	41	103	205	318

¹ Values expressed in 1960 prices. ² Includes cotton products other than raw cotton and cotton linters.
 Note: These projections are tentative and may be

changed when the final report is published by the Institute for Economic Research, Tokyo. They do not necessarily reflect the views of USDA.

JAPAN: NUMBER ONE PLUS

Japan's plan to double per capita income to \$700 between 1960 and 1970 should greatly increase her purchasing power and stimulate the demand for more U.S. farm products.

Japan's meager agricultural resources combined with a dense and expanding population means she is hard pressed to maintain even 80 per cent self-sufficiency in food. Most other farm products like cotton and tallow used in Japanese industry also have to be imported. Japan purchases nearly \$2 billion worth of foreign farm products annually, ranking the nation as one of the world's largest agricultural importers.

Currently the United States is the major supplier of farm commodities to Japan, supplying 32 per cent of the market in 1962. Cotton and soybeans account for more than 50 per cent of all Japanese farm imports from the U.S. We also provide four-fifths of the beef tallow imports, about two-thirds of the hides and skins and almost half of the corn.

Japan's recent suspension of import restrictions on grain sor-

ghums gives the United States a crack at a larger share of the rapidly growing feed grain market. But the trend towards trade liberalization has opened up the overall Japanese market to a host of competitors as well.

The Japanese are inclined to buy from the U.S. as their most dependable source of supply and as Japan's best export market. But the inclination isn't strong enough for them to pass up any real savings on prices offered by other exporting countries. Also, the present Japanese trade policy is to try to buy from other countries when it will help increase Japan's exports.

In the future, U.S. farmers will have to do some hard selling and promotion to keep their products moving into Japan in greater quantities.

Nevertheless, the export picture for the United States is bright. A growing population and greater prosperity will mean that the Japanese will be eating more and adding western-type foods to their traditional diets.

There is a rapidly rising de-

mand for meat, dairy products and poultry in Japan. U.S. sales of nonfat dry milk have shown dramatic growth in recent years. And the preference for meat, milk and poultry should increase the demand for U.S. feed grains, especially corn and grain sorghums.

Wheat and wheat products are also becoming more popular with the Japanese. The United States, despite some stiff competition from Canada and Australia, supplies a large share of the Japanese wheat market—about 40 per cent in 1963. Greater prosperity in Japan should also increase imports of other farm products like safflower seeds, soybean oil and meal, fruits and vegetables not grown locally and even some convenience foods and livestock products.

But if Japan is to remain the United States' No. 1 dollar market for farm products it will have to maintain and expand its markets in the U.S. and other free world countries. Two-way trade is what makes Japan a solvent customer and the U.S. farmer's best foreign market. (36)

Italy Seen Importing Less U.S. Wheat, More Feed Grains In Coming Decade

It looks like Italy will have to rely even more on imports of food and other farm products a decade from now than it does today.

Italian demand, spurred by a larger population and higher income per person, will likely grow at an annual rate of 2.4 per cent in the 1965-1975 period. But farm output will rise only 2 per cent a year.

A new ERS study makes this point in a projection of Italy's supply and demand situation to 1965, 1970 and 1975. The basic research, done by Italian economists under ERS contract, has been supplemented by figures for 1960-62.

Italy will undoubtedly get many of its farm imports from fellow members of the European Common Market. But prospects for U.S. markets in Italy look good, too—if Common Market restrictions don't prevent us from maintaining reasonable access to these markets.

Although our total farm exports should increase, there will be some shift in commodities.

U.S. wheat exports to Italy, according to the projections, will fall sharply in the 1965-75 period (see table). By 1975 Italian farmers will be growing 6 per cent more than in 1955-57—and doing it on far fewer acres. The government has lowered support prices for wheat in the last few years in an attempt to divert land from wheat to feed crops, vegetables and other better quality foods. The 6 per cent increase in total output will come from a one-third increase in yields.

Then too, Italians will be eating less bread and other grain products as higher income and more plentiful supplies put meat, vegetables, fruits and the like within reach of more people.

The outlook for U.S. exports of feed grains is a completely differ-

ent picture. They're projected to climb considerably. Italy's livestock production is expected to increase 50 per cent over the 1955-57 base by 1975. What's more, each animal will get more grain. Only 16 per cent of the feed intake per animal unit was grain during the base period; this will go up to 26 per cent by 1970.

So with more animals to feed and more grain fed per unit, Italian farmers will need 143 per cent more feed grains in 1970, 180 per cent more in 1975, than they used in the mid-1950s.

Italy can produce some of the extra grain. Just the same, as the gap between output and requirements widens, it will become a feed grain importer on a very large scale.

U.S. soybean exports to Italy may climb substantially in the next decade. To save foreign exchange, the Italian government is trying to cut back imports of fats and oils in favor of oilseeds to be

processed in Italy.

In this effort Italy more than doubled oilseed imports between 1955-57 and 1960-62. Imports in 1963-64 are expected to reach 800,000 metric tons. This suggests the projections shown in the table may be too low.

While the U.S. supplied only 4 per cent of Italy's oilseed imports in 1955-57, our share by 1960-62 had shot up to 39 per cent. This was due largely to reduced Italian imports of soybeans from Red China.

The Italians will buy more U.S. tobacco in the years ahead, too. Italy supplies cigarettes in large quantity to the Common Market. But increases in its own production aren't likely because land is needed for food, skilled labor is scarce and production costs are high.

U.S. cotton should maintain its steady share, over 40 per cent, of total Italian imports in the next decade. (37)

ITALY PROJECTED TO TAKE MORE U.S. FEED GRAINS, LESS WHEAT IN DECADE AHEAD

Commodity	Annual average		Projection		
	1955-57	1960-62	1965	1970	1975
1,000 metric tons					
Wheat, total imports	648	1,164	100	95	140
From United States:					
Based on 1955-57 share	84	—	13	12	18
Based on 1960-62 share	—	544	47	44	65
Feed Grains, total imports	636	2,771	1,835	3,245	3,680
From United States:					
Based on 1955-57 share	34	—	97	172	195
Based on 1960-62 share	—	322	213	376	427
Oilseeds, Nuts and Kernels, total imports	207	526	315	397	471
From United States:					
Based on 1955-57 share	8.8	—	13	17	20
Based on 1960-62 share	—	205	123	155	184
Fats and Oils, total imports	318	375	268	348	403
From United States:					
Based on 1955-57 share	125	—	105	136	157
Based on 1960-62 share	—	125	88	115	133
Leaf Tobacco, total imports	8.3	17	7	21	30
From United States:					
Based on 1955-57 share	.8	—	.7	2.1	3.0
Based on 1960-62 share	—	3.7	1.5	4.6	6.6
Cotton, total imports	180	258	210	225	240
From United States:					
Based on 1955-57 share	83	—	97	104	110
Based on 1960-62 share	—	121	100	106	113

Virgin Lands Not Being Abandoned Now And Perhaps Never, Khrushchev Says

Recent reports that the Soviets plan to abandon the Virgin Lands are misleading.

True, the 1963 grain harvest in the Virgin Lands was almost a complete failure.

Nevertheless, judging from recent statements by Khrushchev and announced plans for grain production, the Soviets evidently expect to use the Virgin Lands indefinitely. The quota for grain to be delivered to the state this year about equals the amounts the Virgin Lands were expected to deliver in earlier years.

This vast region east of the Urals was opened to farming a decade ago as part of the Soviet drive to raise agricultural output—especially the share of grain production available for state procurement.

Over 100 million acres have been brought under cultivation since 1954.

The Virgin Lands are short on rainfall. They need dryland farming techniques, but these were neglected in favor of continuous cropping which has hurt both the soil and crop yields.

After five mediocre crops in a row, Soviet authorities are now turning their attention to increasing grain output, not by bringing still more land under cultivation, but by raising yields on the land already cultivated.

The 1963 crop failure focused attention on the need for use of dryland farming methods, including the need to let portions of land lie fallow to replenish soil moisture and control weeds.

Intensive use of fertilizer is, of course, the key to upping Soviet grain production.

This is especially true in the Ukraine, the Central Black Soil Zone and other regions of European Russia where there is enough moisture to get the full benefit of fertilization.

Annual fertilizer production stands today at almost 20 million metric tons. But 80 million tons will be needed by 1970 if program goals are to be met.

Last December, in the wake of the Virgin Lands grain failure, the Kremlin set aside \$46 billion to expand the chemical industry, including output of chemical fertilizer.

Some other sectors of the economy will undoubtedly have to be curtailed to permit expenditures of this size.

As for abandoning the Virgin Lands, Khrushchev has made it clear the region is too important as a source of grain for state use to write off in the foreseeable future.

He has said some land in the region could *eventually* be converted to grazing of livestock, if grain output can be markedly increased both in the Virgin Lands and in the more fertile areas of European Russia. (39)

Chile Imports More P.L. 480 Foods To Meet Need, Ease Payments Problem

Chile's farm output hasn't kept up with population growth in the past few years. Nor has it been able to keep up with the demand of urban workers with rising wages for more meat, dairy products, vegetables, fruits and other high quality foods.

As a result Chile has had to fill the food gap with imports. This has taken foreign exchange that was already scarce, further increasing a serious balance of payments problem.

Many of these farm imports have come from the United States. We shipped only \$10.5 million worth in 1959. The next year the figure more than doubled, to \$21.8 million. In 1961 it was up to \$34.3 million. And despite the import controls imposed in 1962, Chile took U.S.

farm products valued at \$27 million in 1962, \$22 million in 1963.

About 60 per cent of U.S. farm exports to Chile have moved under P.L. 480. Mostly sold for Chilean currency rather than for dollars, these U.S. shipments have helped to prevent Chile's foreign exchange holdings from shrinking more than they already have.

Wheat and flour comprise our most important farm export to Chile, followed by soybean oil, tobacco, dairy products and rice.

Markets for these U.S. commodities will probably grow as Chile's population grows. This holds true despite Chile's goal of a 62 per cent increase in agricultural output during the 10-year development plan (1961-70) under the Alliance for Progress.

The plan faces serious obstacles. Only 38 per cent of Chile's land area is classed as farmland. Of this, only 8 per cent is actually cultivated. The rest is pasture, forests or woodlands.

Recent studies indicate farmland could be increased about 10 per cent. But most of the hoped-for 62 per cent increase in farm output would have to come through higher yields on present acreage.

Chile's development plan also calls for a 69 per cent increase in mining output, chiefly copper. From its copper earnings in world markets and from domestic sources Chile had planned to finance \$7.5 billion of the \$10 billion program, the rest coming from foreign aid.

Yet in 1963, when Chile needed to sell more copper abroad to pay for programs at home, it had to ask producers to cut output because world prices were weak.

Even before the cutback, export earnings had fallen to the point where Chile faced serious balance of payments problems. Gold and foreign exchange reserves dropped from a high of \$132 million in 1959 to \$74 million in 1961. (40)

The following publications are issued by the Economic Research Service and cooperatively by the state universities and colleges. Unless otherwise noted, reports listed here and under Sources are published by ERS. Single copies are available free from the Division of Information, OMS, U.S. Department of Agriculture, Washington, D.C. 20250. State publications (descriptions below include name of experiment station or university after title) may be obtained from the issuing agencies of the respective states.

recent publications



KENAF: A BIBLIOGRAPHY, 1950-1962. Compiled by Ray Corkern, Marketing Economics Division. ERS-153.

Kenaf is a long-fibered annual pulp crop which is a potential source of raw material for the paper and pulping industry. This bibliography should aid market researchers and others appraising Kenaf as a possible cash crop.

HOW THE UNITED STATES IMPROVED ITS AGRICULTURE. R. P. Christensen, W. E. Hendrix and R. D. Stevens, Development and Trade Analysis Division. ERS-For. 76.

This report was prepared at the request of AID to show less developed nations how the U.S. has been able to rapidly increase farm productivity.

AGRICULTURE IN TUNISIA: ORGANIZATION, PRODUCTION, AND TRADE. Henrietta M. Holm and Carolee Santmyer, Regional Analysis Division. ERS-For. 67.

Redistribution of farmland takes high priority in the current 10-year farm program. Special attention is being given to introducing high-yield irrigated crops into areas once unirrigated.

FARM REAL ESTATE SALES IN ILLINOIS. Folke Dovring, University of Illinois, and William H. Scofield, Farm Production Economics Division. Illinois Agricultural Experiment Station Bulletin 697.

The general level and trend of land prices in Illinois from 1952 to 1957 remained high according to a new report based on sales records of farmlands during that period. Tracts of land transferred in bona fide sales were generally smaller than average farms, most tracts being bought to enlarge farms rather than to serve as independent units. Smaller tracts sold for higher prices per acre than larger ones.

A SELECTED BIBLIOGRAPHY ON INTERLOCAL GOVERNMENTAL COOPERATION INCLUDING REFERENCES TO RURAL AREAS. John E. Stoner and Catherine F. Siffin, Indiana University, under contract with Farm Production Economics Division. Miscellaneous Publication 958.

A selected bibliography of materials on cooperation between local government units in rural areas has not been readily available until now. Because agricultural areas may benefit from experience with interlocal cooperation in urban areas, such information is also included in this publication.

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Two Thin Dimes

The homemaker paid about 20 cents a week more for a market basket of U. S. farm food in 1963 than she did in 1962.

The retail cost of the market basket averaged \$1,078 for the year, about 1 per cent above 1962. It would have gone up more, however, if increased marketing charges had not been largely offset by decreased returns to farmers.

The value of the foods in the market basket at the farm was \$394 in 1963, \$15 less than in 1962. This was 1 per cent above the postwar low in 1956. Or to put it another way, the farmer's share of the consumer's food dollar spent in retail stores dropped to 37 cents, the lowest since 1934 when it was 34 cents.

The charges for marketing were \$684 in 1963, an increase of \$26 over 1962.

Where then did the 20 cents extra the house-

wife spent actually go?

Transportation costs did not increase. Neither did the prices of most goods and services bought by food manufacturing firms.

There was an increase in the amount food marketing firms paid for such things as rent and depreciation on equipment.

After-tax profits of food manufacturers did not increase. They were 2.2 per cent of sales in the first nine months of 1963—exactly the same level as in 1962. After-tax profits of a group of 16 leading food chains for the first nine months of 1963 averaged 1.2 per cent—the same as in 1962.

Some of the retail price increase probably is due to higher labor costs. Hourly earnings of food marketing employees were 3 per cent higher in 1963 than in 1962. However, this increase was partly offset by increased output per man-hour. (41)

TRENDS IN INDIA'S AGRICULTURAL TRADE. Stanley I. Richards, Regional Analysis Division. FAER-15.

India's farm exports, averaging over \$500 million per year, account for about 40 per cent of total foreign exchange earnings. The United Kingdom is India's leading export market, taking about half of its agricultural exports. The U.S. ranks second, importing an average of \$84 million in farm products per year. (See December 1963 Farm INDEX.)

AGRICULTURAL POLICIES OF FOREIGN GOVERNMENTS INCLUDING TRADE POLICIES AFFECTING AGRICULTURE. (Rev. March 1964) Regional Analysis Division. Agr. Handbook No. 132.

This new report up-dates the 1957 study of agricultural policies of foreign governments. It discusses economic changes from 1957 to 1963 and regional economic integration movements in Latin America, Europe, Africa and Asia.

THE 1964 WESTERN HEMISPHERE AGRICULTURAL SITUATION (Supplement 1 to the 1964 World Agricultural Situation). Regional Analysis Division ERS-For. 71.

THE 1964 WESTERN EUROPE AGRICULTURAL SITUATION (Supplement 2 to the 1964 World Agricultural Situation). Regional Analysis Division. ERS-For. 72.

THE 1964 EASTERN EUROPE AGRICULTURAL SITUATION (Supplement 3 to the 1964 World Agricultural Situation). Regional Analysis Division. ERS-For. 73.

THE 1964 FAR EAST, COMMUNIST CHINA, OCEANIA AGRICULTURAL SITUATION (Supplement 4 to the 1964 World Agricultural Situation). Regional Analysis Division. ERS-For. 74.

THE 1964 AFRICA AND WEST ASIA AGRICULTURAL SITUATION (Supplement 5 to the 1964 World Agricultural Situation). Regional Analysis Division. ERS-For. 75. (For all of the above publications see March 1964 Farm INDEX.)

THE ORGANIZATION OF WHOLESALE FRUIT AND VEGETABLE MARKETS IN MINNEAPOLIS-ST. PAUL AND DULUTH-SUPERIOR. J. K. Hanes, Marketing Economics Division, in cooperation with Minnesota Agricultural Experiment Station. MRR-647. (See March 1964 Farm INDEX.)

DRIVE-IN DAIRIES IN CENTRAL CALIFORNIA — DEVELOPMENT, ORGANIZATION, AND OPERATION. Jack E. Klein and Leo R. Gray, Marketing Economics Division. MRR-636. (See January 1964 Farm INDEX.)

EFFECT OF CHANGES IN PRODUCT PRICE RELATIONSHIPS ON FARM ORGANIZATION AND INCOME, CLAY SOIL FARMS-SOUTHWESTERN OKLAHOMA. James R. Martin and William F. Lagronne, Farm Production Economics Division, James S. Plaxico, Oklahoma State University, and Larry J. Connor, formerly with Farm Production Economics Division. Oklahoma State University Experiment Station Bulletin 621. (See February 1964 Farm INDEX.)

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HOW COLOR OF RED DELICIOUS APPLES AFFECTS THEIR SALES. Hugh M. Smith and Robert E. Frye, Marketing Economics Division. MRR-618.

Retail sales of highly colored Red Delicious apples are shown in this report to be significantly greater than sales of Red Delicious apples only partly red.

COSTS OF OPERATING TRACTORS IN NEBRASKA, 1961. T. S. Thorfinnson, Farm Production Economics Division, and A. W. Epp, Nebraska Agricultural Experiment Station. Bulletin 480. (See April 1964 Farm INDEX.)

Red Dream, U.S. Reality

Seeing the difficulties their own farmers face in the struggle to get ahead or stay ahead of population growth, people in the Soviet Bloc countries no doubt wonder how American farmers can produce such an abundance of food and fiber. How does the United States produce so much wheat, for instance, that we can ship them 200 million bushels, or more, if they request it? The Voice of America is telling them how we did it in a six-part series prepared by ERS to be beamed overseas in 17 languages. The series includes: Food for the family; profile of American agriculture; production practices; marketing; financing; technology and its impact. (42)

THE FARM INDEX

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